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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,428	02/17/2004	Geoffrey David Bootle	DP-307793	2019
7590 DAVID P. WOOD DELPH TECHNOLOGIES, INC. Legal Staff, Mail Code: 480-410-202 P.O. Box 5052 Troy, MI 48007-5052		02/02/2007	EXAMINER HAMO, PATRICK	
			ART UNIT 3746	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 02/02/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/780,428	BOOTLE, GEOFFREY DAVID	
	<b>Examiner</b>	<b>Art Unit</b>	
	Patrick Hamo	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 February 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3 and 5-11 is/are rejected.
- 7) Claim(s) 11 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12 July 2004</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Election/Restrictions***

This application contains claims directed to the following patentably distinct species: (I) the species of figures 2-16; (II) the species of figure 17. The species are independent or distinct because species I is drawn to a pair of coaxial plungers driven by a single cam ring while species II is drawn to parallel-spaced plungers driven by separate cams. The species are not disclosed as being usable together and are therefore mutually exclusive.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.  
MPEP § 809.02(a).

During a telephone conversation with David Wood on January 29, 2007 a provisional election was made without traverse to prosecute the invention of species I, claims 1-3 and 5-11. Affirmation of this election must be made by applicant in replying to this Office action. Claim 4 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. The preamble of the claim reciting "A common rail fuel pressurization system" merely states the purpose or intended use of the invention and is not considered a limitation. Therefore, claim 11 fails to further limit the subject matter of claim 1. See MPEP §2111.02(2).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sobek, 2,313,302.

Sobek discloses a pump for pumping fluid with a first plunger 6 and a second plunger 5 each within a bore 2, 3, respectively, within a housing wherein the plungers with the bore define a pumping volume (see figs. 2-5), an inlet port 20 and an outlet port 21, an end of the first plunger arranged to cover the inlet during discharge and an end of the second plunger arranged to cover the outlet during intake, and each covering their respective ports in an intermediate stage (p. 1, col. 2, ll. 38-50), and there inherently being moments when the inlet and outlet ports are only partially covered. Regarding claim 11, the pump of Sobek is clearly capable of being used with a common rail system.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobek.

Sobek discloses the invention substantially as claimed except for the following limitations: the pump comprises two or more pairs of plungers.

However, this is a mere duplication of parts and fails to patentably distinguish over the prior unless a new and unexpected result is produced. See MPEP §2144.04(6)(b).

Claims 2-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobek in view of Babitzka, 4,709,673.

Sobek teaches all the limitations substantially as claimed except for the following taught by Babitzka: two pairs of plungers 7, 9 aligned along two common axes 6, 8, driven by a single cam ring 31, the two pairs of plungers offset by 135° in order to optimize the supply rate of the individual partial injections of the two sets of plungers (col. 1, ll. 26-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Sobek with Babitzka in order to optimize the supply rate of injection (col. 1, ll. 26-29).

Furthermore, in regards to the claim limitations regarding pumping cycle phases of 115° to 130°, 120°, and 130°, the optimal figure for the phase difference is a matter of routine experimentation and therefore the difference between these values and that of the prior art fails to patentably support the claimed limitations in view of MPEP §2144.05(2)(a).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobek in view of Jay, 6,240,901.

Sobek discloses the invention substantially as claimed except for the following taught by Jay: a common rail fuel pressurization system (col. 1, ll. 26-27) that uses higher pressure pumps and separates the process of pressure generation and fuel injection to make the fuel pumping process less expensive and inject more uniformly (col. 1, ll. 13-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Sobek with Jay in order to make the fuel pumping process less expensive and inject more uniformly (col. 1, ll. 13-37).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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